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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/617,386	07/11/2003	Taketoshi Nakano	1035-460	2910

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EXAMINER

SHENG, TOM V

ART UNIT	PAPER NUMBER
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2677

DATE MAILED: 09/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/617,386	Applicant(s) NAKANO ET AL.	
	Examiner Tom V. Sheng	Art Unit 2677	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 July 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>7/11, 10/29, 6/23</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Taku (JP 2000-112435) in view of De Lange (US 5,719,593).

As for display apparatus claim 1 and associated display method claim 6, Taku teaches a display apparatus (display as shown in drawing 3) comprising:

an image display section (LCD panel 1; drawing 3) for performing display of data written in the image display section (inherent), the data being held thereon for a predetermined holding period (every full frame display inherently held for a certain duration);

a full screen memory for storing therein data of at least one frame for a whole display area of the image display section (the SRAM within the X driver 5 is at least one frame large);

an image-display-section refreshing section (performed by controller 2 with signals PDY and CNT at high level during entire FRM period; see drawings 4 and 5) for refreshing the data written in the image display section (even for a still picture, blank black or white display, refresh has to occur at a sufficient rate in order to maintain the

display of an LCD panel);

a partial-display-area refreshing section (performed by controller 2 with signals PDY and CNT at high level for only a part of the FRM period) for refreshing data written in the partial display area (corresponds with sector display field D). See paragraphs 25-31.

Moreover, Taku teaches a control section (controller 2) for (i) causing data read out from the respective memories (from the SRAM of X driver 5), to be written into the display areas to which the data corresponds (either the entire LCD panel or only the sector display field D), and (ii) causing the partial display area to move to an predetermined position within a display screen of the image display section when a predetermined time lapses (drawing 1 or 2; the position of the sector display field D changes as each time period passes). See paragraphs 23-24.

Taku's display constitutes display either in normal full screen mode or partial display mode of a moving picture. Taku does not teach that the refreshing of data written in the partial display area is performed after the data is held for a period shorter than the holding period of the image display section. Taku also does not teach a partial screen memory, provided in addition to the full screen memory, for storing therein data of at least one frame for a partial display area.

De Lange teaches image processing for simultaneous display of both foreground and background images that may be refreshed at different rates due to the nature of the respective images. In particular, he teaches using a frame buffer with a random access port that facilitates simultaneous access to pixel of both foreground and background

images (column 11, lines 6-31). One of ordinary skill in the art, would recognize that similarly, to provide simultaneous access, two memories could be provided with one for the background (full screen) and one for the foreground (partial screen). This is functionally equivalent to De Lange's method and is considered a variation. Moreover, due to the nature of Taku's partial display, it now can be refreshed at a higher rate and thus corresponds to claimed holding of data for a period shorter than the holding period of the image display section (normal or blank full screen display).

Therefore, in view of De Lange's display method and the understanding of one of ordinary skill in the art, it would have been obvious to modify Taku's display such that two frame buffers operating different refresh rates are used to facilitate the display of both foreground and background images efficiently and reduce power consumption.

As for claims 2, 3, 7 and 8, the movement of the partial display area, whether line-by-line or randomly, is just a variation of Taku's method as illustrated in drawing 1.

As for claims 4, 5, 9 and 10, the De Lange's teaching of a predetermined mixing area is a border between the background and the foreground (fig. 1-2; column 6, lines 8-38). Moreover, one of ordinary skill in the art would recognize various possibilities in using color data, black data, white data, or some other composite data in defining the border as equivalent ways to produce either a smooth transition or a visible distinction between the foreground and the background, as a matter of preference.

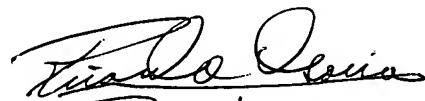
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tom V. Sheng whose telephone number is (571) 272-7684. The examiner can normally be reached on 9:00am - 6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala can be reached on (571) 272-7681. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tom Sheng
September 6, 2005


Ricardo Osorio
PRIMARY EXAMINER